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THE TEACHER, PROGRAMED MATERIALS, AND INSTRUCTIONAL INTERACTION, TEACHER'S MANUAL.

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WEST CHESTER STATE COLL., PA., COOP. RES. CENTER

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THIS TEACHER'S MANUAL DELINEATES THE VARIOUS MODES OF INSTRUCTIONAL INTERACTION TO TAKE PLACE BETWEEN THE PROGRAMED MATERIALS, STUDENTS, TEACHERS, AND CONSULTANTS. THE PROJECT WAS BASED UPON THE ASSUMPTION THAT PROGRAMED MATERIALS MERIT AND REPRESENT A NEW APPROACH IN THE FORMAT AND DESIGN OF LEARNING MATERIALS. OTHER REPORTS ON THIS PROJECT WERE ASSIGNED ACCESSION NUMBERS ED 003 197, ED 003 237, AND ED 003 238. (LP)

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COOPERATIVE RESEARCH PROJECT

"The Teacher, Programed Materials and Instructional Interaction"

TEACHER'S MANUAL

RESEARCH PROJECT CENTER
WEST CHESTER STATE COLLEGE
202 Sharpless Street
West Chester, Pennsylvania

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COOPERATIVE RESEARCH PROJECT

COOPERATING AGENCIES

United States Office of Education

Pennsylvania Department of Public Instruction

Area Nine Curriculum Committee

West Chester State College

Offices of the Superintendents of
Allegheny, Berks, Bucks, Chester, Delaware, Lancaster
and Montgomery Counties and the City of Philadelphia

Sixty Pennsylvania Public School Districts

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TO THE TEACHER:

It is indeed a pleasure to extend a cordial welcome to you as a participating teacher in the Cooperative Research Project on "The Teacher, Programed Materials and Instructional Interaction." As one of the nearly one hundred teachers involved you are a vital member of a group devoted to one of the most comprehensive professional studies ever undertaken in Pennsylvania.

From the standpoint of size alone the present inquiry is unique in the annals of Pennsylvania educational history. Approximately five thousand junior high school students in one hundred sixty-five classes in beginning Algebra will spend a year of study using a relatively new type of learning material. As a teacher you will guide these young people in becoming acquainted with these materials and will endeavor to discover how these students may learn most effectively through their use.

The degree of cooperative effort involved in this undertaking is of even greater significance than the number of people included. More than sixty Pennsylvania school districts, through their boards of school directors and administrators, are committed to this project. To state the matter in its simplest terms, it is only through the common desire of these individuals to explore carefully a possibility of improving the level of classroom instruction that this project has materialized. You as a teacher are involved only because of their interest in professional development. These school districts have not only willingly agreed to a certain amount of disruption in their instructional programs and consequent problems in scheduling and class assignment but have also, without reservation, accepted certain pre-established conditions under which the instruction will take place. It should also be recognized that the districts have made a sizeable financial contribution to the study through the purchase of the instructional materials needed.

The idea for a study of the use of programed learning materials originated with the Area Nine Curriculum Committee representing Chester, Delaware and Montgomery Counties. Through the interest of the State Council of Education and the Department of Public Instruction, a proposal was prepared and application made for federal funds under Title VII of the National Defense Education Act. When it became evident that federal support would be granted, the personnel of the county superintendents' offices of the twelve counties participating undertook the time-consuming task of contacting the individual school districts. Arrangements were made with the publishers of the various programed and testing materials whereby generous discounts for research purposes were offered.

The West Chester State College and certain school districts agreed to make technical and administrative personnel available on a full-time basis for a year or more to staff the project. The College also provided the necessary office space and was most generous in loaning the necessary equipment and supplies.

The federal research grant of $174,529, made for the furtherance of this project, is the largest grant ever awarded to a state agency for such purposes. The number of participating agencies involved represents one of the greatest cooperative efforts in educational research ever undertaken in Pennsylvania. You, the classroom teacher, during the coming year will determine whether this effort was worthwhile.

N. SIDNEY ARCHER
Project Director
Department of Public Instruction

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"THE TEACHER, PROGRAMED MATERIALS, AND INSTRUCTIONAL INTERACTION"

The present Cooperative Research Project is based upon the tacit assumption that programed materials have merit and represent a new approach in the format and design of learning materials. The large scale comparative study carried out in Roanoke under the auspices of Encyclopaedia Britannica Films demonstrated that students under regular classroom procedure, with conventional texts, did not achieve as well as either students with programs without teachers or students with programs with a qualified teacher to answer questions.

The Roanoke and similar studies consequently represent a point of departure for the present inquiry. It is not the intent of this project to determine the value of programed materials as such, nor is it intended to assay the worth of first year algebra programed materials now in print. Rather is it intended to examine the basic question, "What is the most effective combination of teacher and program that best affords the most productive educational use of both the teacher and the program?"

There is evident a tendency among both teachers and administrators on the secondary level to view programed materials as an either-or proposition -- that is, either teacher or program. It is presumed by this study that both elements are desirable. The point at issue is the interrelation or interaction between the two. Is there a manner or method of using programed materials in the classroom which will produce learning outcomes that are superior to those of an alternate manner or method? It is on the basis of this question that the five teaching conditions of this project were devised.

Briefly summarized, these teaching conditions are as follows:

I. The teacher acts as the main instructional agent, using programed materials in lieu of the conventional text. Daily presentations and customary classroom practice will constitute the basic methodology. The student's pace will be controlled as in the usual mode of group instruction.

II. The teacher will give an initial presentation of one, two or more days as recommended to introduce a new topic or unit after which the student will use the programed material, continuing at his own pace until he has completed the unit.

III. The teacher assigns a unit of the programed material to be completed by a specific date. At that time the teacher then gives a terminal presentation of organization, application and review of the materials studied.

IV. The teacher organizes the class into small seminar groups as determined by the pace and mastery of the students on the programed materials. Instruction is carried on via the seminar groups with discussion, organization, review and preparation for the succeeding unit. Pacing is on the small group basis rather than on the basis of the entire class or of the individual student.

V. The teacher assumes a helping role and is present to give aid in individual situations. The student will pace himself and the programed materials will act as the main instructional agent. The student's opportunity for individual progress is at a maximum and the teacher will approximate tutorial status.

The foregoing is admittedly an over-simplification of the various teaching conditions inherent in the design of this study and is presented here primarily as a description of the nature of the project. It is essential that the participating teachers recognize that all of the five conditions described must be included within the scope of the study if it is to be seriously contended that all reasonable manners or methods of using programed materials have been explored. Evidence on hand indicates that effective learning will take place under any of the postulated conditions. The present attempt is to determine their relative effectiveness.

In order to sustain the validity of the study the participating teachers have been randomly assigned in equal numbers to the various conditions. It is to be expected that some teachers will find considerable personal discomfort in assuming a role for the purposes of the project that may be foreign to the individual's customary classroom attitude. It is to be hoped that all participants will recognize the need to endeavor as strongly as possible to maintain the situation as a teaching condition may be made. It is only through such earnest efforts that educational investigation will make a contribution to the profession. If one of the conditions should emerge as demonstrably superior, it is essential that the superiority be demonstrated as occurring insofar as is possible, independently of the individual teaching personalities involved. Hence, the random assignment to teaching condition is necessary. The prime intent of the entire project is the evaluation of the teaching condition, not the evaluation of the teacher.

Hundreds of secondary school students throughout the Commonwealth are being introduced to programed materials for the first time. They will experience confusion and frustration in a novel venture. Their immaturity will contribute greatly to their bewilderment. The equilibrium and consistency with which the participating teacher will interpret his teaching condition role will be the major factor in reducing the student's anxiety.

The present inquiry is systematically introducing programed materials into a large sample of secondary schools. As a part of this inquiry it is also intended to determine whether certain teacher-program conditions are more appropriately employed with students of given intellectual ability. Consequently, a standardized test of mental maturity will be administered to all student participants. Since the students' reading level is also evidently a factor, a standardized test of reading achievement will be given. Progress in achievement in algebra will be measured by the use of the various unit and chapter tests and final examinations devised as a part of the programed materials as well as by standardized achievement tests to be administered at mid-year, at the end of the year, and at a point some six months after the conclusion of the course. More subjective evaluation will be obtained through the use of anecdotal records, bi-monthly teacher evaluation sessions, and the report of the visiting field consultants.

Record keeping is an onerous task. Nevertheless, the ultimate findings of this inquiry are absolutely dependent upon the accuracy and care with which the participating teachers maintain their records. The intensive statistical treatment of the data collected will constitute the basis for such conclusions as appear warranted. The publication of these findings will be the final task and with this step the Cooperative Research Project on "The Teacher, Programed Materials and Instructional Interaction" will be completed.

STATEMENT OF THE FIVE CONDITIONS

CONDITION I

The teacher acts as the main instructional agent, using programed materials in lieu of the conventional text. The organization of the classroom does not deviate from typical practice. The teacher introduces new material, gives examples, and then assigns material in the programed text that covers the class presentation. The teacher may also assign new material so that the class is grounded in fundamental understandings. The pace of the class is restricted by the teacher, and the concept of individualization is held to a minimum.

CONDITION II

Rather than daily presentations by the teacher (as suggested in Condition I), the teacher will give "overview" lectures that will cover a topic, unit, or chapter of instruction. One, two, or several days may be necessary to introduce and overview the material. The student will then commence to use the programed material. He will work at his own pace, either in the available class sessions or at home, until he reaches the assigned terminative point. The students who complete the mastery will be allowed the opportunity to work independently on related content matter and/or enrichment material.

CONDITION III

The teacher assigns a unit, section, or chapter of the program to be completed by a specific date. At this time, the teacher reviews, organizes, synthesizes the material, and offers a variety of examples and situations where the material can be employed. If students complete the program prior to the assigned date, the student will be given the opportunity to explore other facets of the content subject through supporting enrichment materials.

CONDITION IV

The teacher organizes the class into small groups as determined by the pace and mastery of the students on the programed materials. The teacher has four or five seminars a week with small groups of students. In the seminar situation, the teacher reviews the previously learned material, synthesizes, and also prepares the students for the new unit of instruction. Student discussions and demonstrations will also be encouraged. For special lectures on relevant enrichment material, the teacher may call the entire class together for one or two days.

CONDITION V

Teacher assumes the role as suggested in the Roanoke "Help" role. The student will pace himself, and the teacher will only be available to help in individual situations. The programed materials will act as the main instructional agent.

THE ROLE OF THE TEACHER

The role of the teacher in conjunction with the use of programed materials in the classroom is the basic point at issue in the present inquiry. In planning the five teaching conditions the intent was to delimit major areas within which a teacher might conceivably function — areas so defined that they would to a large measure establish appropriate guidelines and eliminate the possibility of undesirable duplications in the carrying out of the teacher's role. While it is evident that the prime purpose of the study is to evaluate the effectiveness of five different concepts of the teacher's role, there still remain certain elements of the teacher's classroom demeanor which will be common to all of the teaching conditions.

The importance of the classroom teacher's role in establishing feelings of security among the students has long been accepted as a truism among professional educators. This aspect of the teacher's activities will be of critical importance during the present investigation. The manner in which you present this study to your students at your first meeting will have a tremendous impact in setting the security tone for the entire year's work. Under no circumstances should the students be told that they are involved in an "experimental project" or an "educational experiment." Such terminology is in itself very disturbing to the average junior high school pupil. His ideas of experimentation are quite vague and ill-formed and we have no way of anticipating what bizarre concepts he might envision as the result of the ill-advised use of the word "experiment."

Your students need to be told that they are going to spend the year studying algebra with a newly developed type of learning materials. It is quite proper to point out to the students that in other places where materials have been used in the past two or three years, the students have learned more effectively, they have learned more, and they have learned more readily than they have through the use of the traditional textbook. You and your class have been chosen by your school administration to use these materials for a year with a view to finding out whether these materials will work well in your school. The students will have to learn how to use these materials in much the same manner as they will have to learn the algebraic content of the materials. You, as teacher, expect that on occasion minor difficulties will arise in learning to use this new kind of textbook. You and the students will consider these little problems as they arise and together will work out a satisfactory solution that will make it possible for the students to continue their learning with even greater facility.

It is an open question whether your students ought to be told that they are one of a great number of groups operating in a similar manner throughout the state. This information in itself would carry the implication of experimentation and might be interpreted by the student to indicate that he is in competition with these other groups. You as teacher are aware that this is not the intent of this investigation. While it is true that we are endeavoring to keep the various teaching groups traveling at approximately the same pace, it is for the purpose of establishing reasonably uniform and consistent classroom situations to contribute to the reliability of the study rather than to invite comparison between groups. If, in a discussion with either your students or their parents, the question of other schools participating should arise then obviously you should be quick to indicate that this is indeed true.

It is apparent that such indication should be given as casually as possible and your whole attitude should imply that this is relatively unimportant. In point of fact, it would probably be desirable for you to adopt as a basic guide line the attitude of underplaying and de-emphasizing the Research Project approach to the students in most instances. It is quite sufficient for our purposes that the class should be vaguely aware that what they are doing is a little different from what they have done in the past but that in the long run they are studying algebra just as the other classes in the school are doing and that the study materials have been presented in a slightly different manner intended to be more helpful to them.

This type of textbook is new and different and it is likely that the student will need to be informed as to a proper approach in studying and as to the requirements on such matters as homework, reviewing, and similar classroom activities. Furthermore, the student should be informed as to your proposed manner of instruction in accordance with the teaching condition to which you are committed. Your approach on the matter of your technique should be quite positive and should be stated as, for example, "I will spend one or two periods with you giving an introduction to the new topic and then we will turn to our programs and I will give you a definite assignment to be completed." Under no circumstances should you indicate to the student that as a part of your participation in the Project your teaching technique has, by agreement, been limited to certain approaches. Rather should you imply to the student through your choice of language and mode of expression that this is the way one operates with this type of material. The student is left with the inference that there are no other alternatives. It is anticipated that you will on occasion have difficulties in remaining within the confines of the teaching condition. Under such circumstances it is expected that you will discuss the problem thoroughly with the Field Consultant whose primary function will be to offer you aid and suggestions in adapting to your required teaching situation.

Most of the students in your class will be meeting programed learning materials for the first time. It will be necessary for you to be quite specific within the confines of your teaching condition in making clear to the students how they are to use these materials. Reading must be done slowly and with more care than in narrative reading. You will need to give classroom practice in this habit and to help develop the attitude that manipulation is not the chief purpose of the problems. Outline the problem solution rather than complete only the computation involved. The student should be guided in his method of studying so that he comes to understand the relationship between past and present assignments. The fragmented nature of programed materials could well result in a student failing to grasp the overall nature of the problem or content involved. Regardless of the teaching condition it will be necessary to develop some technique whereby a coherent understanding of the continuity of the subject is apparent to the student.

If it is your intention that the students should take notes then you ought to clearly prescribe both the occasion and the manner in which such notes should be taken. It will be necessary to continually emphasize the importance of clear, legible handwriting. The careless writing of digits and mathematical symbols can only lead to ultimate confusion.

The novelty of the programed format should in itself establish sufficient motivation to carry the student for several days or weeks. It is probable that once this exploratory period has been passed you will face the perennial problems of motivation that have always been a part of the classroom situation. At this point teacher ingenuity will be at a premium. You will have difficulty, perhaps, because some of your favorite devices will possibly not be in consonance with your teaching condition requirements. This likewise is a matter for discussion with your Field Consultant. Anticipation of developing problems in this area and prior discussions will be invaluable in assisting you to meet classroom conditions as they arise. Certain of the teaching conditions will probably present more difficulties in this respect than others and careful pre-reading and pre-planning will be necessary. One of the purposes of periodic teachers' meetings scheduled throughout the year will be to provide an opportunity for a discussion of problems of this nature that will be common to all of you participating in the Project.

Recognition should be given to concomitant learning and your responsibility for developing proper attitudes, appreciations, and understandings. There is an ever present danger of developing in the student either a passive attitude or a strong aversion to anything pertaining to the course. Your comments will be interpreted in many ways and you should be ever on guard to possible implications in relation to student attitudes that might be deduced from your classroom comments. You as a teacher should attempt to avoid making any decisions or value judgments of the worth of the teaching condition. While your comments and judgments will be earnestly solicited and carefully studied at the conclusion of the Project, an early judgment on your part will inevitably show through in your classroom manner and practice. It has long since been observed, "Attitudes are caught, not taught." Attitudes are not taught in the sense of direct teaching, but they most certainly can be taught indirectly via the implication and inference route. Regardless of what personal feelings you may find yourself developing, and your Field Consultant can help you with this, you should endeavor to present a facade of boundless enthusiasm to the students in so far as is humanly possible. An attitude such as this on your part cannot help but through example influence the development of a favorable attitude on the part of the students. This attitude will go far toward solving many of your teaching problems.

For quick reference there is given below a brief summary of the responsibilities that your participation in the Research Project will entail:

1. Become thoroughly familiar with your role as a teacher under your stipulated teaching condition as early as possible.

2. Develop your interpretation of this role in terms of specific behavior and action in the classroom.

3. Be prepared to discuss your difficulties with your visiting Field Consultant; your colleagues in the project will have their problems, too.

4. Plan to present your views at the teachers' meetings to be held throughout the year.

5. Endeavor to maintain the suggested schedule of coverage as nearly as possible with your class but do not sacrifice your student's mastery of the subject in an effort to keep pace.

6. Keep the required records accurately and up-to-date and be ready to furnish the necessary data at the specified time.

7. Maintain a thoroughly professional attitude in connection with the administration of the standardized tests involved in the project, follow directions exactly, and resist the temptation to tamper with the time limits because "your students are good students." These results are research data and will be used to evaluate the effectiveness of the teaching condition, not the teacher.

8. Note the actual dates when students drop out or transfer into your class during the year and include them in your final record.

9. Prepare a brief anecdotal record of any student who presents unusual learning difficulties; a summary of such records from many teachers may point up inherent weaknesses of the programed approach or the teaching condition.

10. Exercise some caution in commenting on the project to other teachers, administrators, parents, and students. You are one of ninety and the other eighty-nine may not see it your way at all. Your reactions are of great concern to your visiting Consultant and should be stated fully and frankly.

THE ROLE OF THE STUDENT

All of the newer trends which characterize the twentieth century revolution in education emphasize initiative and responsibility on the student's part. The importance of experiencing success rather than failure, learning by doing, learning through sense impression, understanding before memorizing, and many other such expressions have become principles of practice in a present day classroom. Programed learning materials have been built upon such elements. No other type of learning procedure places such a great premium on the student's willingness to maintain a desirable level of personal integrity during the learning process.

It should be evident from a consideration of the description of the various teaching conditions stipulated that the degree of student responsibility in learning increases rather significnatly from Condition I through to Condition V. Even though the degree of student responsibility does vary, it is apparent that in every instance the student carries a greater responsibility than in the conventionally operated classroom. Students vary widely in their ability to accept and discharge a responsibility. It will be necessary for the teacher to devise appropriate means of checking intermediately between tests to be certain that the student is living up to his responsibility. It is also evident from the design of the Project that the greater the degree of responsibility placed on the student, the less opportunity there is for group interaction within the confines of the given teaching condition. This is particularly apparent in Conditions IV and V. The teacher will consequently have to make a deliberate and determined effort to develop these feelings of responsibility on the part of the individual student without the aid of group feeling.

The teacher will also find it necessary to give support to the student as he struggles to preserve his personal integrity. The ever present temptation to cheat will be present in at least two forms. The one, and perhaps this is the less obvious, will be the temptation to cheat in the learning process on the programed materials and to substitute covering material for mastery of material. There will always be a certain number of students who will feel that, by a rapid reading of a certain number of frames coupled with a more or less blind guessing on the responses called for, they have met the obligation imposed upon them regardless of the fact that little or no true learning has taken place. Certain of the learning conditions established are particularly susceptible to this abuse and it will require constant vigilance on the part of the teacher to bring home to the student the fact that little mastery of learning has taken place. In addition there is, of course, the traditional interpretation of student cheating in terms of dishonesty in examinations. Again, these opportunities will vary in accordance with a design of a particular teaching condition, but the temptation and opportunity will be present under all conditions. Attitudes on such dishonesty vary widely from student to student and school to school. It will be up to the teacher to determine what action is appropriate in a particular situation.

There will also be a tendency on the part of the student, in consideration of the nature of the programed materials, to view learning as a more mechanical process than heretofore. The development of this attitude is facilitated in a subject field such as mathematics because of the ever present tendency, even in the traditional classroom,

to substitute mastery of manipulative skills for a true understanding of quantitative relationships. The student should be encouraged to use as many methods as possible in analyzing his problems so that he understands the operation not as a mechanical device but as a functional development in the field of mathematics. If the student conceives the program as a mechanistic approach, it will become extremely difficult for him to sustain a necessary level of motivation throughout the year. The student will have to become aware of the inherent value of the program for him and in this manner develop an intrinsic interest in it.

The student should not have the opportunity to develop a feeling that he is a guinea pig as the result of his participation in the research project. He needs to be encouraged to retain his concept of himself as a typical junior high school student. His classmates will in all probability exhibit some interest in his new type textbook and may possibly, for reasons of their own, be inclined to make disparaging remarks. At no time is the pressure to conform greater than at this age level. These young people rebel strongly at any situation that implies a deviation from accepted fashions of behavior. The teacher who emphasized similarities rather than differences will likely gain unexpected dividends in stronger motivation, and improved progress in learning.

STUDENT PROCEDURE WITH PROGRAMED MATERIALS

The procedure under the programed materials is to be used by the student and is of great importance in creating an effective learning situation. It is essential that the proper procedure be followed in order that the maximum benefits are to be obtained from the materials. The students must realize that in working with the programed materials the factor of time is not of primary importance. This is not a contest in which the winner is the one who finished first. Quality of work is the essential feature that should be stressed continually throughout the year.

Each day when the student begins to work on the programed materials we should briefly review the preceding day's work and rework the last few frames. This preparation period is very beneficial in eliminating errors at the start of a new period of work.

The responses that are to be elicited from the students should be in written form and all related work should accompany the answer. Those students using TEMAC materials will be expected to keep a record or notebook of their work which can be checked periodically by the teacher. The students using SRA materials will be supplied with answer books in which the frame response can be recorded, due to the limited amount of space provided in the book the student will not be able to show his work.

When the student's response does not agree with the appropriate response in the program the student should mark a heavy check on the number of the answer blank. Relatively few errors should be made by the student because of the small increments that exist between the frames. When an error does occur the following procedure should be adopted:

1. Carefully reread the frame and rework the problem.

2. If the new answer does not agree, go back and rework the previous five or ten frames and rework the problem.

3. If the student is incorrect at this point he should continue on and work the following five to ten frames and then return to the frame that has caused the difficulty.

4. Only after this procedure has been carefully followed should the student elicit the help of the teacher.

If the above procedure is strictly adhered to there will be very few questions concerning the materials.

THE ROLE OF THE CONSULTANT

Because the success of this research project requires that each individual participating teacher adhere to the teaching format as outlined by the condition to which he has been committed, consultants have been made available to assist him in interpreting his role as a teacher and in defining the boundaries of that condition within which he will endeavor to teach. The consultant will visit each of his assigned schools at least twice monthly to assist the participating teacher in establishing his teaching condition and to keep him informed as to the progress of the project as a whole. During these visits any completed records or anecdotal reports should be presented to the consultant and any suggestions or difficulties should be brought to his attention. It should be clearly understood that the purpose of the consultant's classroom visitation is to evaluate that teaching condition and not the teacher involved, and to advise on teaching techniques compatible with the specific condition.

The visiting consultant is the liason agent who will maintain communications between the individual teachers and between the teachers and the research project center. The consultant will be in a position to share with the teachers any information or suggestions uncovered that will aid in the improvement of the classroom situation. He will also be aware of the difficulties being experienced by the individual teacher and will be the only medium through which common problems may be identified. The importance of this aspect of the consultant's role can not be over-emphasized. One of the prime reasons for creating the consultant position was to provide an opportunity for oral reporting on field conditions and to relieve the participating teacher of the necessity of filing voluminous written reports at frequent intervals. It is to be hoped that the teachers will avail themselves of the opportunity presented by this arrangement.

The field consultants have been carefully chosen on the basis of their teaching experience and professional reputation. They can not, and will not, become involved in transmitting any information between the participating teacher and the local school authorities. The professional competence of the teacher is not a matter at issue in the present inquiry. The visiting consultant will confine his observations to an evaluation of the effectiveness of a given teaching condition. Any evidence of a violation of this policy should be reported directly to the project coordinator for his investigation.

Local school administrators, by the fact of their agreement to participate in the project, have given ample evidence of their interest in the ultimate outcomes of the research. In the same manner that the consultant serves as a link between the teacher and the project center, so will he serve as a link between the project center and the participating district. The consultant will be in constant readiness to transmit information on the overall development of the study and to present interim progress reports to the local administrators. Any comments or observations by the school authorities will be greatly appreciated by him and will be properly reported to the project center. The field consultant will endeavor to interpret the requirements of the research project to the administrative personel, to clarify the conditions under which their representative teacher must present the programed material, and to

promote understanding of the problems which may arise because of these requirements.

The consultant will also arrange a series of meetings of the teachers in his group in order to provide opportunity for the exchange of information and experiences of mutual benefit, the consideration and review of common problems, and the interim evaluation of the progress of the study. Members of the project center staff will also be present and questions of policy and procedure will be examined. These forum discussions should contribute greatly toward shaping the overall development of the research study.

Recapitulating briefly the role of the consultant:

1. He will maintain as closely as possible a schedule of regular visitations to the participating teachers in his area in order to supervise the maintenance of the procedure designated by the particular condition under which the teacher is expected to proceed.

2. He will endeavor to promote and assist in the maintenance of a reasonably uniform rate of coverage of the programed courses of study.

3. He will correlate testing schedules in the schools involved in the program and secure records and testing data from participating teachers in his area.

4. He will conduct periodic evaluation meetings for discussion of general progess and possible adjustments.

5. He will offer special assistance if necessary should an emergency arise affecting the operation of the project.

CONDITION I

BASIC TYPE OF INSTRUCTION

The format of the primary instructional method to be employed in Condition I will consist of a teacher structured lecture - discussion presentation. The programed materials will be used as a secondary method of instruction in order to fixate the materials to be learned.

SEQUENCE AND PATTERN OF INSTRUCTION

The teacher acts as the main instructional agent, using programed materials in lieu of the conventional text. The organization of the classroom does not deviate from the typical practice traditionally found in the classroom. The teacher introduces new material, gives examples, and assigns frames in the programed materials that cover the class presentation. The class will proceed as a group and the teacher will determine the pace of the class.

TEACHER ACTIVITY

The teacher will be concerned with those activities found in the conventional classroom. Much of the time will be spent in conditioning lectures and discussions with the entire class. The assignment which is made in the programed material should be carefully checked in order to insure that each student is using the program and not depending exclusively on the teacher's presentation. The teacher will use the techniques that are used in the conventional classroom such as lectures, discussions, overhead projector, reports, filmstrips, etc. Part of the class period should be allotted to supervised study in which the programed materials are utilized by the students. The teacher should structure these presentations which follow the tests to include the material with which the students seem to have difficulty. An important feature of the teacher's role will be to continually study the students' work in order to diagnose their difficulties as well as to evaluate their achievement. Understanding of the concepts involved must be obtained before the class proceeds to the next unit.

ASSIGNMENTS

The teacher will make daily assignments which will cover the material that has been discussed in the presentation of that day. The assignment can be started during the class period in order to insure that every one is proceding with out any difficulities. The teacher will pace the work of the class in terms of the Rate of Coverage Chart found in this manual. It is essential that student progress does not deviate from the teacher's pace. Each student will be expected to prepare the assignments in a student notebook which can be checked periodically.

TESTING

At the end of each unit of study the teacher will administer a test covering the work found in the unit. The test will be administered to the group on a given date and the absentees will make up the test immediately on their return to school. The testing schedule can be found in the Rate of Coverage Chart included in this manual. Further information will be found in the Temac Test Manual and in the SRA Supplemental Manual.

The marking and assigning of grades to individual students will be left to the particular school district. Any student who does not achieve the required standards on a particular test should repeat that part of the material in which the difficulty is found under the direction of the teacher. The test may be returned to the student for diagnostic purposes, but should be recollected and retained by the teacher.

PROVISION FOR PRACTICAL DRILLS, REMEDIAL WORK AND ENRICHMENT MATERIALS

The practice work in the Supplemental Manual will be given to those students who are failing to achieve the desired test results or who show a lack of comprehension in the daily classwork. The practice drills may be given at the teachers discretion or at the request of the student.

The enrichment work will be assigned to those students who are showing a high degree of comprehension of the course material. This work should be of a high quality and the results would be presented to the class. The work should be given to cover a specific amount of time. The student should be encouraged to initiate the work by requesting a specific topic of interest.

The remedial work should be carried out under the close supervision of the teacher. The teacher may employ both the practice drills and the programed materials to assist in this particular function.

ROLE OF THE TEACHER

It is important that the teacher develop in the students a positive attitude toward the subject, toward programed materials, and the manner in which the programed materials are being used. For the success of the project it is essential that each student works up to his capablities. Thus, the student should be motivated through encouragement, praise when deserved, and in general, the establishment and maintenance of good classroom rapport. In this manner, the teacher will be able to develop and utilize the potentialities of the student.

CONDITION II

BASIC TYPE OF INSTRUCTION

The method of instruction to be employed in Condition II is of a dualistic nature. The teacher will present an overview of the new material which will then be followed by the students' individual utilization of the programed instruction materials.

SEQUENCE AND PATTERN OF INSTRUCTION

The teacher will present an overview of each new unit of work. This overview will consist of an introduction of new materials, using illustrative examples, and related work. It is the purpose of the overview to provide direction and meaning to the programed materials before the student begins his individual work. After the overview has been completed the student will proceed to work with the programed materials. He will work at his own pace, either in the class session or at home, until he reaches the assigned terminative point.

TEACHER ACTIVITY

The purpose of the teacher is to present the overview and to guide the students in their use of the programed materials. The overview will be presented through teaching techniques normally found in the conventional classroom, techniques that effectively motivate the student. The overview, which provides direction for and meaning to the programed materials, may involve the presentation of new material to be studied, along with applications and examples of the concepts found therein, or may be of necessity a review of that material which the class has difficulty comprehending. At the conclusion of the overview the student will be given a unit assignment and a definite time limit for completion of the work in the programed materials. The teacher will assist the student in working through the materials; however, there will be no pre-planned individual instruction. The teacher is to answer questions only in order to assess and evaluate each student's difficulties in terms of his individual ability.

ASSIGNMENTS

The teacher will make a definite assignment covering a specific unit of study. This assignment will be from the programed materials and is to be completed within a prescribed length of time. The material is to be covered during scheduled class periods and at home according to the ability of the student and at the discretion of the teacher. The responsibility for budgeting his study time to insure completion of the work within the specified time limit, rests with the student. However, the teacher might well set a minimum daily frame coverage requirement to ensure necessary student progress.

TESTING

At the end of each unit of study the teacher will administer the test provided, covering the work found in the unit. The test will be administered to the group on a given date and the absentees will make up the test immediately on their return to school. The testing schedule will be found in the Rate of Coverage Chart in this manual. Further information concerning the testing will be found in the Temac Test Manual and in the SRA Supplemental Manual. Extreme caution should be exercised in the care and handling of tests and test manuals.

Marking and assigning of grades to individual students will be left to the discretion of the particular school district. The testing schedule was designed to provide a suitable number of marks for each marking period. However, should you have the time and desire to test further, this will be permissible provided that the project center is furnished with a copy of the testing material.

PROVISION FOR PRACTICE DRILLS, REMEDIAL WORK AND ENRICHMENT MATERIALS

A manual of supplementary problems and student enrichment suggestions has been provided for use at the teacher's discretion. The practice drills may be used for entrenchment of understanding or for remedial work as required by individual students. The enrichment suggestions provide ample material for the students who show a high degree of comprehension of the course material and are to be assigned concurrently with the course material. The remedial work should be carried out under the close supervision of the teacher. The teacher may employ both the practice drills and the programed materials to assist in this particular function.

ROLE OF THE TEACHER

It is important that the teacher develop in the students a positive attitude toward the subject, toward programed materials, and the manner in which the programed materials are being used. For the success of the project it is essential that each student work up to his capabilities. Thus, the student should be motivated through encouragement, praise when deserved, and, in general, the establishment and maintenance of good classroom rapport. In this manner the teacher will be able to develop and utilize the potentialities of the student.

CONDITION III

BASIC TYPE OF INSTRUCTION

The method of instruction to be employed in Condition III is of a two step nature. The students will study, work, and complete the programed instructional materials individually after which the teacher will present an overview of the material which they have covered.

SEQUENCE AND PATTERN OF INSTRUCTION

The teacher assigns a unit, section, or chapter of the program to be completed by a specific date. At this time, the teacher reviews, organizes, synthesizes the material, and offers a variety of examples and situations where the material can be employed. If students complete the program prior to the assigned date, the student will be given the opportunity to explore other facets of the content subject through supporting enrichment materials.

TEACHER ACTIVITY

The activities of the teacher are, to guide the students in their use of programed materials and to summarize by presenting a post view on the materials covered. The post view will be presented by normal techniques found in any conventional classroom techniques that effectively motivate the student in his learning situation. The high points of the presentation can be determined by the teacher as he performs the duty of guided study in the pre-period of presentation. The teacher, during the time that the students working on the programed materials, will assists the students in working through the materials by answering questions on request by individual students. The teacher has an opportunity to clarify many difficulties by knowing where the students are making their mistakes so that these difficulties can be covered in the post review.

ASSIGNMENTS

The teacher needs to give a long range as well as a minimum daily assignment. This long range assignment should be in line with the coverage chart for Condition III and the minimum daily assignment should permit the students to have completed the work before the teacher's post-review.

TESTING

After the completion of each unit the teacher will administer a unit test which is provided in the manual of tests. The test will be administered to the group on a given date and the absentees will make up the test immediately on their return to school. The testing schedule can be found in the Rate of Coverage Chart which is in this manual. Also the cumulative review test will be given according to the test schedule. Additional information concerning testing can be found in the TEMAC Testing Manual and in the SRA Supplemental Manual.

In marking the test, the Project Center is interested only in the raw scores. The grade in the test is left to the judgement of the teacher according to the local school philosophy.

PROVISION FOR PRACTICE DRILLS, REMEDIAL WORK AND ENRICHMENT MATERIALS

A manual of supplementary problems and student enrichment suggestions has been provided for use at the teacher's discretion. The practice drill may be used for entrenchment of understanding or for remedial work as required by individual students. The enrichment suggestions provide ample material for the students who are showing a high degree of comprehension of the course material, and are to be assigned concurrently with the course material. The remedial work should be carried out under the close supervision of the teacher. The teacher may employ both the practice drills and the programed materials to assist in this particular function.

ROLE OF THE TEACHER

It is important that the teacher develop in the students a positive attitude toward the subject, toward programed materials, and the manner in which the programed materials are being used. For the success of the project it is essential that each student works up to his capabilities. Thus, the student should be motivated through encouragement, praise when deserved, and in general, the establishment and maintenance of good classroom rapport. In this manner the teacher will be able to utilize and develop the potentialities of the student.

CONDITION IV

BASIC TYPE OF INSTRUCTION

The method of instruction to be employed in Condition IV will be dualistic in nature consisting of an interaction between the teacher and the programed materials. The teacher will conduct seminar sessions which will provide a means by which the teacher and the program may effectively complement each other.

SEQUENCE AND PATTERN OF INSTRUCTION

The student will work from the programed materials on an individual basis and will participate in small group seminars approximately once a week. These seminars will be structured around the common problems that are identified in the programed materials. On occasion the entire class will meet together to consider particular topics of interest or to employ special methods of instruction such as films or reports. The teacher may give individual student help as the need arises, but this should be considered as an incidental activity and not something which is pre-planned.

TEACHER ACTIVITY

The teacher will organize the class into a number of small groups, as determined by the rate of coverage and comprehension of the material. These groups will be very flexible in nature and possess a high degree of mobility to provide the opportunity for the student to change from group to group. In these seminar groups the teacher will review the previously learned material, synthesize, and prepare the students for the new unit of instruction. Also, depending upon the composition of the group, various topics of enrichment may be discussed. The majority of the time spent in seminar groups should be devoted to an interaction among the students and between the teacher and the students. This is the only opportunity provided for the student to exchange and compare information and ideas with the other members of the class.

While the teacher is conducting the seminar, the remainder of the class will be working individually on the programed materials. These students should have very few questions concerning the material found in the program, if they have followed carefully, instructions for the use of the material. Toward the end of a class period the unresolved questions can be answered by the teacher. The teacher should restrict the individualized help as much as possible. A constant check of the student's progress is needed in order to assure a satisfactory rate of student accomplishment. The two main sources of this information will be the summary record and the seminar discussion group.

ASSIGNMENTS

There will be no specific assignment given to the class, for each student will proceed at his own rate, but there will be a minimum rate of coverage which each student is expected to maintain. A student will pace himself as to the amount of work which he will cover in any one given day. Some students will work in excess of the minimum standards by undertaking larger assignments of homework in order to complete the work.

TESTING

The testing materials have been provided and the sequence of the tests is found in the Rate of Coverage Chart. The students will be required to take the test at the completion of each unit of work, and every effort should be made to facilitate immediate testing. The classroom arrangement for testing is left to the teacher's discretion. It is suggested that the physical set up of the room be such as to permit three separate activities to be carried out simultaneously — seminar discussion, individual study, and testing. Another possibility for test administration would be to designate certain days of the week for testing. This however, prevents the student from achieving at his maximum rate.

With the administration of tests on an individual basis, the development of a strong honor system becomes important. Students must be led to develop a responsibility for doing their own work without giving test information to others or accepting help from others. Only in this way will the student gain maximum benefits from the program in terms of accomplishment and grade awards.

The marking and assigning of grades to individual students will be left to the particular school district. Any student who does not achieve the required standards on a particular test should repeat that part of the material in which the difficulty is found. The test papers should be retained by the teacher until all students have been tested. Information concerning the results and those specific topics which caused difficulty, should be carefully presented. The teacher should use the test for both diagnostic and evaluative purposes.

PROVISION FOR PRACTICE DRILLS, REMEDIAL WORK AND ENRICHMENT MATERIALS

Remedial work will be in the form of reworking that particular unit in the programed materials. The teacher will keep individualized instruction to a minimum. As suggested, the practice drill may be given to the student after he has reworked the materials in order for the student and teacher to assess his progress. The drill practice may also be given to certain students before a test in order to fixate the concepts found in the material.

None of the enrichment material will be used until the student has completed the entire course of work. The amount of time remaining in the school year will determine to what extent a student will participate in enrichment work.

ROLE OF THE TEACHER

It is important that the teacher develop in the students a positive attitude toward the subject, toward the programed materials, and the manner in which the programed materials are being used. For the success of the project it is essential that each student works up to his capabilities. Thus, the student should be motivated through encouragement, praise when deserved, and, in general, the establishment and maintenance of good classroom rapport. In this manner the teacher will be able to develop and utilize the potentialities of the student.

CONDITION V

BASIC TYPE OF INSTRUCTION

The programed materials will act as the main instructional agent with the teacher available only to help in individual situations when requested.

SEQUENCE AND PATTERN OF INSTRUCTION

The teacher will provide no classroom instruction for the group as a whole. He will work with individual students at their request. The students will proceed through the programed materials in class and at home pacing themselves on an individual basis.

TEACHER ACTIVITY

The teacher will help individual students only when requested to do so and will avoid instructing the group as a whole. It is important that the teacher maintain his proper role which is that of a "helper" — available when help is requested but otherwise refraining from teaching in the usual manner. Diagnosis of individual difficulties is an important part of the teacher's role in Condition V. This can be accomplished through careful analysis of test results as well as through the teacher's work with individual students.

ASSIGNMENTS

Since the student paces himself through the programed materials, for homework he will merely continue this pattern. However, the teacher must be sure that all students adhere to the minimum time schedule as indicated in the Rate of Coverage and Testing Schedule. Thus, when necessary, in individual cases the teacher must require that students spend an additional amount of time at home on the materials to insure the maintenance of the time schedule.

TESTING

The testing materials have been provided and the sequence and schedule for the tests is found in the Rate of Coverage and Testing Schedule. The tests will be taken on an individual basis at the completion of each unit of work. Further information concerning the use of the test materials can be found in the TEMAC Test Manual or the SRA Supplemental Manual.

With the administration of tests on an individual basis, the development of a strong honor system becomes important. Students must be led to develop a responsibility for doing their own work without giving test information to others or accepting help from others. Only in this way will the student gain maximum benefits from the program in terms of accomplishment and grade rewards.

A given test should not be returned or discussed until completed by all students. Areas of weakness as revealed by the test should be discussed with the student, but specific test items should not be discussed until all students have taken the test.

PROVISION FOR PRACTICE DRILLS, REMEDIAL WORK, AND ENRICHMENT MATERIALS.

Since students proceed at their own rates there may be a tendency to rush through the programed materials without understanding. Thus, the teacher must be alert to the need for remedial and drill work. This need may be indicated by the quality and quantity of student questions and the teacher's work with individual students, as well as by unsatisfactory performance on tests.

The student should be required to rework a particular unit in the programed materials if warranted by his lack of achievement. In addition, a separate manual of supplementary materials has been provided. The drill exercises in this manual should be made available for student use when needed. The teacher may desire to assign these exercises in individual cases. The enrichment suggestions may be used for student projects by those who finish the course early.

ROLE OF THE TEACHER IN TERMS OF ATTITUDE

It is important that the teacher develop in the students a positive attitude towards the subject, towards programed materials and the way in which the programed materials are being used. For the success of the project it is essential that students work up to their capabilities. Thus, the students should be motivated through encouragement, praise when deserved, and in general, through the establishment and maintenance of good classroom rapport.

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37.	Solving Inequalities	62	15	189
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39.	Properties of Absolute Value	1	13	137
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53.	Expressions Containing Exponents	37	14	119
54.	Exponents and Multiplication	51	10	104
55.	Exponents and Division	61	14	113
56.	More About Multiplication and Division	75	5	52
57.	Using Exponents	80	7	44
58.	Polynomials	87	17	197
59.	Multiplication of Monomials	104	9	104
60.	Multiplication of Polynomials	113	12	94
61.	Division of Polynomials	1	8	69
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70.	Solution by Graphing	104	7	58
71.	Quadratic Equation of Word Problems	111	4	35
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RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I *indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	CH. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-books			2		2					
	Standardized tests				2	4					
	UNIT ONE										
1	Numbers & numerals	(1)	69								
1	Directed numbers	(2)	219	7							
1	Absolute value	(3)	249								
1	Real numbers	(4)	53			11					
	Unit 1 test				1	12		1			
	UNIT TWO										
2	Sets & subsets	(5)	148	4							
2	Intersection & union of sets	(6)	173			16			4 tests	7 tests	
	Unit 2 test				1	17		2			
	UNIT THREE										
2	Ordered pairs & relations	(7)	160								
2	Functions	(8)	129	6							
2	Inequalities, graphs & relations	(9)	135			23					
	Unit 3 test				1	24		3			
	Cumulative review test 1 *				1	25		cum. 1	*	*	
	UNIT FOUR										
2	Functions & their converses	(10)	115								
2	Complements of sets	(11)	103	6							
		(12)	206			31					
3	Mappings										
	Unit 4 test				1	32		4			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	CH. #	FRAMES	DAYS ON UNIT	DAYS TEST	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT FIVE										
3	Points & real numbers	(13)	72								
3	Order properties	(14)	52	4							
3	Binary operations	(15)	132			36					
	Unit 5 test				1	37		5			
	UNIT SIX										
3	Closure	(16)	49								
3	Identity elements	(17)	92	4							
3	Inverses	(18)	175			41					
	Unit 6 test				1	42		6	6 tests		
	UNIT SEVEN										
4	Commutative operations	(19)	69								
4	Subtraction of directed numbers	(20)	95								
4	Associative operations	(21)	58	7							
4	Distributive operations	(22)	63								
4	Laws of arithmetic	(23)	108			49					
	Unit 7 test				1	50		7			
	Cumulative review test 2 *				1	51		cum. 2			
	UNIT EIGHT										
4	Absolute value	(24)	54								
4	Multiplication of directed numbers	(25)	78								
5	Equations, pronumerals & solution sets	(26)	111	7							
5	Equations involving multiplication & division	(27)	156			58					
	Unit 8 test				1	59		8			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS OF UNIT	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT NINE										
5	Identities, expressions and terms	(28)	139								
5	Equations with two pronumerals	(29)	282	9							
5	One-step equations	(30)	134								
6	More one-step equations	(31)	76			68					
	Unit 9 test				1	69		9			
	UNIT TEN										
6	Two-step equations	(32)	76								
6	Linear equations	(33)	165	8							
6	Fractional equations	(34)	148		1	77			4 tests		
	Unit 10 test				1	78		10			
	UNIT ELEVEN										
6	Word problems	(35)	89								
6	Properties of inequalities	(36)	108	8							
6	Solving inequalities	(37)	189								
6	Inequalities & relations	(38)	45			86				7 tests	
	Unit 11 test				1	87		11			
	Cumulative review test 3 *				1	88		cum. 3	*	*	
	Midyear test				1	89					
	UNIT TWELVE										
7	Properties of absolute value	(39)	137								
7	Absolute value equations	(40)	160	5							
7	Formulas	(41)	138			94					
	Unit 12 test				1	95		12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	DEV. + O-	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT THIRTEEN										
7	Advanced word problems	(42)	132	4		99					
	Unit 13 test				1	100		13			
	UNIT FOURTEEN										
8	Graphs-relations	(43)	150								
8	Coordinate plane	(44)	191								
8	Straight lines, introduction	(45)	107	8					5 tests		
8	Straight lines, definition	(46)	148			108					
	Unit 14 test				1	109		14			
	Cumulative review test 4 *				1	110		cum. 4	*	*	
	UNIT FIFTEEN										
8	Slope-straight line	(47)	181								
8	Point-slope equations	(48)	60	7							
8	Slope-intercept	(49)	147								
9	Systems of equations	(50)	129			117					
	Unit 15 test				1	118		15			
	UNIT SIXTEEN										
9	Word problems-two unknowns	(51)	64	3		121			4 tests	7 tests	
	Unit 16 test				1	122		16			
	UNIT SEVENTEEN										
9	Exponents	(52)	115								
9	Exponential expressions	(53)	119								
9	Multiplication & exponents	(54)	104	9							
9	Division & exponents	(55)	113								

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Test 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
9	More multiplication and division	(56)	52								
9	Using exponents	(57)	44			131					
	Unit 17 test				1	132		17			
	UNIT EIGHTEEN										
9	Polynomials	(58)	197								
9	Multiplication of monomials	(59)	104								
9	Multiplication of polynomials	(60)	94	8							
10	Division of polynomials	(61)	69			140					
	Unit 18 test				1	141		18			
	Cumulative review test 5 *				1	142		cum. 5	*	*	
	UNIT NINETEEN										
10	Factoring	(62)	200								
10	Rational expressions	(63)	56								
10	Radicals	(64)	115	8							
10	Simplifying radicals	(65)	124			150					
	Unit 19 test				1	151		19			
	UNIT TWENTY										
10	Radical equations	(66)	45								
10	Quadratic equations	(67)	146								
10	Completing square	(68)	84	7							
10	Quadratic formula	(69)	97			158					
	Unit 20 test				1	159		20			
	UNIT TWENTY-ONE										
10	Solution by graphing	(70)	58								
10	Quadratic equations	(71)	35	2		161					
	Unit 21 test				1	162		20			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST	DAYS CUM.	DEV. + O-	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT TWENTY-TWO										
10	Solution set of inequalities	(72)	45	3							
10	Proof	(73)	85			165					
	Unit 22 test				1	166		22	5 tests	7 tests	
	Cumulative review test 6 *				1	167		cum. 6	*	*	
	Standard tests				2	169					
	Collect books - attitude form			1		170					
			8416	137	33	170		28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Tests 1,2,3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FR. MES	DAYS TCH.	DAYS TST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation -issue books		2		2					
	Standardized tests			2	4					
1	Symbols and order of operation	1-502	5	1	10		1	5 tests	7 tests	
1	Numerical and algebraic expressions	503-975	4	1	15		2			
1	Equations	976-1523	5	1	21		3			
1	Formulas	1524-1970	5	1	27		4			
	Cumulative review test 1	1-1970		1	28		cum. 1	*	*	
2	Positive and negative numbers	1971-2760	8	1	37		5	5 tests		
2	Removing parentheses	2761-3030	5	1	43		6			
2	Operations with monomials, binomials and polynomials	3031-3357	6	1	50		7			
	Cumulative review test 2	1971-3357		1	51		cum. 2	*	*	
2	Equations (two step)	3358-3654	6	1	58		8			
2	Graphs	3655-4027	5	1	64		9	5 tests	8 tests	
	Cumulative review test 3	3358-4027		1	65		cum. 3	*	*	
3	Systems of equations	4028-4300	5	1	71		10			
3	Verbal problems	4301-4601	7	1	79		11			
3	Special products and factoring	4602-5082	6	1	86		12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION I * indicates cumulative test (40 minutes) Tests 1, 2, 3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS TCH.	DAYS TST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Midyear test			1	87					
3	Factoring trinomials	5083-5283	6	1	94		13			
	Cumulative review test 4	4028-5283		1	95		cum. 4	*	*	
3	Solving second degree equations	5284-5461	5	1	101		14	5 tests	7 tests	
4	Fractions	5462-6150	8	1	110		15			
4	Fractional equations	6151-6330	3	1	114		16			
4	Verbal problems	6331-6511	10	1	125		17			
	Cumulative review test 5	5284-6511		1	126		cum. 5	*	*	
4	Square roots & radicals	6512-6766	7	1	134		18	4 tests		
4	Solving quadratic equations	6767-6931	6	1	141		19			
5	Ratio & proportion	6932-7127	5	1	147		20			
5	Verbal problems	7128-7308	4	1	152		21		6 tests	
5	Numerical trigonometry	7309-7551	4	1	157		22			
	Cumulative review test 6	6512-7551		1	158		cum. 6	*	*	
5	Review	7552-8312	9		167			4 tests		
	Standardized tests			2	169					
	Collecting books		1		170					
		8312	137	33	170		28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST-	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
1	Orientation-books			2			2					
	Standardized tests					2	4					
	UNIT ONE											
1	Numbers & numerals	(1)	69									
1	Directed numbers	(2)	219	2	5							
1	Absolute value	(3)	249									
1	Real numbers	(4)	53				11					
	Unit 1 test					1	12		1	4 tests	7 tests	
	UNIT TWO											
2	Sets & subsets	(5)	148									
2	Intersection & union of sets	(6)	173	2	2		16					
	Unit 2 test					1	17		2			
	UNIT THREE											
2	Ordered pairs & relations	(7)	160									
2	Functions	(8)	129	3	3							
2	Inequalities, graphs & relations	(9)	135				23					
	Unit 3 test					1	24		3			
	Cumulative review test 1					1	25		cum. 1	*	*	
	UNIT FOUR											
2	Functions & their converses	(10)	115									
2	Complements of sets	(11)	103	3	3							
3	Mappings	(12)	206				31					
	Unit 4 test					1	32		4			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT FIVE											
3	Points & real numbers	(13)	72									
3	Some order properties	(14)	52	1½	2½							
3	Binary operations	(15)	132				36					
	Unit 5 test					1	37		5			
	UNIT SIX											
3	Closure	(16)	49									
3	Identity elements	(17)	92	1	3							
3	Inverses	(18)	175				41					
	Unit 6 test					1	42		6	6 tests		
	UNIT SEVEN											
4	Commutative operations	(19)	69									
4	Subtraction of directed numbers	(20)	95									
4	Associative operations	(21)	58	2	5							
4	Distributive operations	(22)	63				47					
4	Laws of arithmetic (review)	(23)	108				49					
	Unit 7 test					1	50		7			
	Cumulative review test 2 *					1	51		cum. 2	*	*	
	UNIT EIGHT											
4	Absolute value	(24)	54									
4	Multiplication of directed numbers	(25)	78									
5	Equations, pronumerals & solution sets	(26)	111	2	5							
5	Equations involving multiplication & division	(27)	156				58					
	Unit 8 test					1	59		8			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT NINE											
5	Identities, expressions and terms	(28)	139									
5	Equations with two pronumerals	(29)	282	2	7							
5	One step equations	(30)	134									
6	More equations	(31)	76				68					
	Unit 9 test					1	69		9			
	UNIT TEN											
6	Two-step equations	(32)	76									
6	Linear equations	(33)	165	3	5					4 tests	7 tests	
6	Fractional equations	(34)	148				77					
	Unit 10 test					1	78		10			
	UNIT ELEVEN											
6	Word problems	(35)	89									
6	Properties of inequalities	(36)	108									
6	Solving inequalities	(37)	189	2	6							
6	Inequalities & relations	(38)	45				86					
	Unit 11 test					1	87		11			
	Cumulative review test 3					1	88		cum. 3	*	*	
	Midyear test					1	89					
	UNIT TWELVE											
7	Properties & absolute value	(39)	137	2	3							
7	Absolute value equations	(40)	160									
7	Formulas	(41)	138				94					
	Unit 12 test					1	95		12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk #	TOPIC	Ch. #	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT THIRTEEN											
7	Advanced word problems	(42)	132	2	2		99					
	Unit 13 test					1	100		13			
	UNIT FOURTEEN											
8	Graphs of relations	(43)	150							5 tests	7 tests	
8	The coordinate plane	(44)	191									
8	Introduction to straight lines	(45)	107	3	5							
8	Definition of a straight line	(46)	148				108					
	Unit 14 test					1	109		14			
	Cumulative review test 4 *					1	110		cum. 4	*	*	
	UNIT FIFTEEN											
8	Slope-straight line	(47)	181									
8	Point-slope equations	(48)	60									
8	Slope-intercept	(49)	147	3	4							
9	Systems of equations	(50)	129				117					
	Unit 15 test					1	118		15			
	UNIT SIXTEEN											
9	Word problems two unknowns	(51)	64	1	2		121					
	Unit 16 test					1	122		16			
	UNIT SEVENTEEN											
9	Exponents	(52)	115							4 tests		
9	Exponential expressions	(53)	119									
9	Multiplication & exponents	(54)	104	3	6							
9	Division & exponents	(55)	113									

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST.	DAYS CUM.	DEV. + C -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
9	More multiplication and division	(56)	52									
9	Using exponents	(57)	44				131					
	Unit 17 test					1	132		17			
	UNIT EIGHTEEN											
9	Polynomials	(58)	197									
9	Multiplication of monomials	(59)	104	3	5							
9	Multiplication of polynomials	(60)	94									
10	Division of polynomials	(61)	69				140					
	Unit 18 test					1	141		18			
	Cumulative review test 5 *					1	142		cum. 5	*	*	
	UNIT NINETEEN											
10	Factoring	(62)	200									
10	Rational expressions	(63)	56									
10	Radicals	(64)	115	3	5							
10	Simplifying radicals	(65)	124				150					
	Unit 19 test					1	151		19			
	UNIT TWENTY											
10	Radical equations	(66)	45									
10	Quadratic equations	(67)	146									
10	Completing square	(68)	84	7								
10	Quadratic formula	(69)	97				158					
	Unit 20 test					1	159		20			
	UNIT TWENTY-ONE											
10	Solution by graphing	(70)	58									
10	Quadratic equations	(71)	35		2		161		21	5 tests	7 tests	
	Unit 21 test					1	162					

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT TWENTY-TWO											
10	Solution set of inequalities	(72)	45	1	2							
10	Proof	(73)	85				165					
	Unit 22 test					1	166		22			
	Cumulative review test 6 *					1	167		cum. 6	*	*	
	Standard tests					2	169					
	Collect books-attitude form			1			170					
			8416	$54\frac{1}{2}$	$82\frac{1}{2}$	33	170		28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Tests 1,2,3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS TCH.	DAYS PROG.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-issue books		2			2					
	Standardized tests				2	4					
1	Symbols and order of operation	1-502	1	4	1	10		1			
1	Numerical and algebraic expressions	503-975	1	3	1	15		2	5 tests	7 tests	
1	Equations	976-1513	2	3	1	21		3			
1	Formulas	1514-1970	1	4	1	27		4			
	Cumulative review test 1	1-1970			1	28		cum. 1	*	*	
2	Positive and negative numbers	1971-2760	2	6	1	37		5			
2	Removing parentheses	2761-3030	2	3	1	43		6			
2	Operations with monomials, binomials and polynomials	3031-3357	2	4	1	50		7	5 tests		
	Cumulative review test 2	1971-3357			1	51		cum. 2	*	*	
2	Equations (two step)	3358-3654	2	4	1	58		8			
2	Graphs	3358-4027	1	4	1	64		9			
	Cumulative review test 3	3357-4027			1	65		cum. 3	*	*	
3	Systems of equations	4028-4300	2	3	1	71		10			
3	Verbal problems	4301-4601	2	5	1	79		11	5 tests	8 tests	
3	Special products and factoring	4602-5082	2	4	1	86		12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION II * indicates cumulative test (40 minutes) Tests 1,2,3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS TCH..	DAYS PROG	DAYS TEST.	DAYS CUM.	DEV. +0-	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Midyear test				1	87					
3	Factoring trinomials	5083-5283	2	4	1	94		13			
	Cumulative review test 4	4028-5283			1	95		cum. 4	*	*	
3	Solving second degree equations	5284-5461	2	3	1	101		14			
4	Fractions	5462-6150	2	6	1	110		15	5 tests		
4	Fractional equations	6151-6330	1	2	1	114		16			
4	Verbal problems	6331-6511	3	7	1	125		17			
	Cumulative review test 5	5284-6511			1	126		cum. 5		*7 tests	
4	Square roots & radicals	6512-6766	2	5	1	134		18	4 tests *		
4	Solving quadratic equations	6767-6931	1	5	1	141		19			
5	Ratio & proportion	6932-7127	1	4	1	147		20			
5	Verbal problems	7128-7308	1	3	1	152		21			
5	Numerical trigonometry	7309-7551	1	3	1	157		22	4 tests	6 tests	
	Cumulative review test 6	6512-7551			1	158		cum. 6	*	*	
5	Review	7552-8312		9		167					
	Standardized tests				2	169					
	Collecting books		1			170					
		8312	39	98	33	170		28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-books				2		2					
	Standardized tests					2	4					
	UNIT ONE											
1	Numbers & numerals	(1)	69									
1	Directed numbers	(2)	219	5	2		11					
1	Absolute value	(3)	249									
1	Real numbers	(4)	53									
	Unit 1 test					1	12		1			
	UNIT TWO											
2	Sets & subsets	(5)	148									
2	Intersection & union of sets	(6)	173	3	1		16			4 tests	7 tests	
	Unit 2 test					1	17		2			
	UNIT THREE											
2	Ordered pairs & relations	(7)	160									
2	Functions	(8)	129	5	1		23					
2	Inequalities, graphs & relations	(9)	135									
	Unit 3 test					1	24		3			
	Cumulative review test 1 *					1	25		cum. 1	*	*	
	UNIT FOUR											
2	Functions & their converses	(10)	115									
2	Complements of sets	(11)	103	5	1		31					
3	Mappings	(12)	206									
	Unit 4 test					1	32		4			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT FIVE											
3	Points & real numbers	(13)	72									
3	Order properties	(14)	52	3	1		36					
3	Binary operations	(15)	132									
	Unit 5 test					1	37		5			
	UNIT SIX											
3	Closure	(16)	49									
3	Identity elements	(17)	92	3	1		41					
3	Inverses	(18)	175									
	Unit 6 test					1	42		6			
	UNIT SEVEN											
4	Commutative operations	(19)	69									
4	Subtraction of directed numbers	(20)	95									
4	Associative operations	(21)	58	5	2		49					
4	Distributive operations	(22)	63									
4	Laws of arithmetic	(23)	108									
	Unit 7 test					1	50		7			
	Cumulative review test 2 *					1	51		CUM. 2	* 6 tests	* 7 tests	
	UNIT EIGHT											
4	Absolute value	(24)	54									
4	Multiplication of directed numbers	(25)	78									
5	Equations, pronumerals & solution sets	(26)	111	6	1		58					
5	Equations involving multiplication & division	(27)	156									
	Unit 8 test					1	59		8			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III *indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT NINE											
5	Identities, expressions and terms	(28)	139									
5	Equations with two pronumerals	(29)	282	6	2		67					
5	One-step equations	(30)	134									
6	More one-step equations	(31)	76									
	Unit 9 test					1	68		9			
	UNIT TEN											
6	Two-step equations	(32)	76									
6	Linear equations	(33)	165	6	2		76					
6	Fractional equations	(34)	148									
	Unit 10 test					1	77		10	4 tests	7 tests	
	UNIT ELEVEN											
6	Word problems	(35)	89									
6	Properties of inequalities	(36)	108									
6	Solving inequalities	(37)	189	6	2		85					
6	Inequalities & relations	(38)	45									
	Unit 11 test					1	86		11			
	Cumulative review test 3 *					1	87		cum. 3	*	*	
	Midyear					1	88					
	UNIT TWELVE											
7	Properties & absolute value	(39)	137	5	1		94					
7	Absolute value equations	(40)	160									
7	Formulas	(41)	138									

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Unit 12 test					1	95		12			
	UNIT THIRTEEN											
7	Advanced word problems	(42)	132	2	2							
	Unit 13 test					1	100		13			
	UNIT FOURTEEN											
8	Graphs-relations	(43)	150									
8	Coordinate plane	(44)	191									
8	Straight lines, introduction	(45)	107	6	2		108			4 tests	7 tests	
8	Straight line definition	(46)	148									
	Unit 14 test					1	109		14			
	Cumulative review test 4 *					1	110		cum. 4	*	*	
	UNIT FIFTEEN											
8	Slope-straight line	(47)	181									
8	Point-slope equations	(48)	60									
8	Slope-intercept	(49)	147	5	2		117					
9	System of equations	(50)	129									
	Unit 15 test					1	118		15			
	UNIT SIXTEEN											
9	Word problems-two variables	(51)	64	2	1		121					
	Unit 16 test					1	122		16			
	UNIT SEVENTEEN											
9	Exponents	(52)	115									
9	Exponential expressions	(53)	119									

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk #	TOPIC	Ch. #	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
9	Multiplication & exponents	(54)	104									
9	Division & exponents	(55)	113									
9	More multiplication & division	(56)	52	7	2		131					
9	Using exponents	(57)	44									
	Unit 17 test					1	132		17			
	UNIT EIGHTEEN											
9	Polynomials	(58)	197									
9	Multiplication monomials	(59)	104									
9	Multiplication polynomials	(60)	94	5	2		139					
10	Division polynomials	(61)	69									
	Unit 18 test					1	140		18			
	Cumulative review test 5 *					1	141		cum. 5	*	*	
	UNIT NINETEEN											
10	Factoring	(62)	200									
10	Rational expressions	(63)	56									
10	Radicals	(64)	115	7	2		150					
10	Simplifying radicals	(65)	124									
	Unit 19 test					1	151		19			
	UNIT TWENTY											
10	Radical equations	(66)	45									
10	Quadratic equations	(67)	146									
10	Completing square	(68)	84	5	2		158			5 tests	7 tests	
10	Quadratic formula	(69)	97									
	Unit 20 test					1	159		20			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes) Unit tests 1,2,3, ..., 22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT TWENTY-ONE											
10	Solution by graphing	(70)	58									
10	Quadratic equations	(71)	35	1	1		161					
	Unit 21 test					[illegible]	162		21			
	UNIT TWENTY-TWO											
10	Solution set of inequalities	(72)	45	2	1		165					
10	Proof	(73)	85									
	Unit 22 test					[illegible]	166		22			
	Cumulative review test 6 *					1	167		cum. 6	*	*	
	Standard tests					2	169					
	Collect books-attitude form				1		170					
			8416	100	37	33	170		28	28	23	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes) Tests 1,2,3, ...22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-issue books			2		2					
	Standardized tests				2	4					
1	Symbols and order of operation	1-502	3	2	1	10		1	5 tests	7 tests	
1	Numerical and algebraic expressions	503-975	3	1	1	15		2			
1	Equations	976-1513	4	1	1	21		3			
1	Formulas	1514-1970	4	1	1	27		4			
	Cumulative review test 1	1-1970			1	28		cum. 1	*	*	
2	Positive and negative numbers	1971-2760	6	2	1	37		5	* 5 tests		
2	Removing parentheses	2761-3030	3	2	1	43		6			
2	Operations with monomials, binomials and polynomials	3031-3357	4	2	1	50		7			
	Cumulative review test 2	1971-3357			1	51		cum. 2		*	
2	Equations (two step)	3358-3654	4	2	1	58		8			
2	Graphs	3655-4027	4	1	1	64		9	5 tests	8 tests	
	Cumulative review test 3	3358-4027			1	65		cum. 3	*	*	
3	Systems of equations	4028-4300	3	2	1	71		10			
3	Verbal problems	4301-4601	5	2	1	79		11			
3	Special products and factoring	4602-5082	4	2	1	86		12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION III * indicates cumulative test (40 minutes Tests 1,2,3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS PROG.	DAYS TCH.	DAYS TEST.	DAYS CUM.	DEV. + 0 -	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Midyear test				1	87					
3	Factoring trinomials	5083-5283	4	2	1	94		13			
	Cumulative review test 4	4028-5283			1	95		cum. 4	*	*	
3	Solving second degree equations	5284-5461	3	2	1	101		14	5 tests	7 tests	
4	Fractions	5462-6150	6	2	1	110		15			
4	Fractional equations	6151-6330	2	1	1	114		16			
4	Verbal problems	6331-6511	7	3	1	125		17			
	Cumulative review test 5	5284-6511			1	126		cum. 5	*	*	
4	Square roots & radicals	6512-6766	5	2	1	134		18	4 tests		
4	Solving quadratic equations	6767-6931	5	1	1	141		19			
5	Ration & propertion	6932-7127	4	1	1	147		20			
5	Verbal problems	7128-7308	3	1	1	152		21	4 tests	6 tests	
5	Numerical trigonometry	7309-7551	3	1	1	157		22			
	Cumulative review test 6	6512-7551			1	158		cum. 6	*	*	
5	Review	7552-8312	9			167					
	Standardized tests				2	169					
	Collecting books			1		170					
		8312	98	39	33	170		28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV OR V * indicates cumulative tests (40 minutes) Unit tests 1,2,3,...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-books			2		2				
	Standardized tests				2	4				
	UNIT ONE									
1	Numbers & numerals	(1)	69							
1	Directed numbers	(2)	219							
1	Absolute value	(3)	249	7						
1	Real numbers	(4)	53			11				
	Unit 1 test				1	12	1			
	UNIT TWO									
2	Sets & subsets	(5)	148							
2	Intersection & union sets	(6)	173	4		16		4 tests	7 tests	
	Unit 2 test				1	17	2			
	UNIT THREE									
2	Ordered pairs & relations	(7)	160							
2	Functions	(8)	129	6						
2	Inequalities, graphs & relations	(9)	135			23				
	Unit 3 test				1	24	3			
	Cumulative review test 1 *				1	25	cum. 1	*	*	
	UNIT FOUR									
2	Functions & their converses	(10)	115							
2	Complements of sets	(11)	103	6						
2	Mappings	(12)	206			31				
	Unit 4 test				1	32	4			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV (K T * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT FIVE									
3	Points & real numbers	(13)	72							
3	Order properties	(14)	52	4						
3	Binary operations	(15)	132			36				
	Unit 5 test				1	37	5			
	UNIT SIX									
3	Closure	(16)	49							
3	Identity elements	(17)	92	4						
3	Inverses	(18)	175			41				
	Unit 6 test				1	42	6			
	UNIT SEVEN									
4	Commutative operations	(19)	69							
4	Subtraction of directed numbers	(20)	95					6 tests		
4	Associative operation	(21)	58	7						
4	Distributive operation	(22)	63							
4	Laws of arithmetic	(23)	108			49				
	Unit 7 test				1	50	7			
	Cumulative review test 2 *				1	51	cum. 2	*	*	
	UNIT EIGHT									
4	Absolute value	(24)	54							
4	Multiplication of directed numbers	(25)	78							
5	Equations, pronumerals & solution sets	(26)	111	7						
5	Equations involving multiplication & division	(27)	156			58				
	Unit 8 test				1	59	8			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV (A ? * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk #	TOPICS	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT NINE									
5	Identities, expressions and terms	(28)	139							
5	Equations with two pronumerals	(29)	282	9						
5	1-step equations	(30)	134							
6	More equations	(31)	76			68				
	Unit 9 test				1	69	9			
	UNIT TEN									
6	Two-step equations	(32)	76							
6	Linear equations	(33)	165	8						
6	Fractional equations	(34)	148			77				
	Unit 10 test				1	78	10	4 tests	7 tests	
	UNIT ELEVEN									
6	Word problems	(35)	89							
6	Properties of inequalities	(36)	108	8						
6	Solving inequalities	(37)	189							
6	Inequalities & relations	(38)	45			86				
	Unit 11 test				1	87	11			
	Cumulative review test 3 *				1	88	cum. 3	*	*	
	Midyear				1	89				
	UNIT TWELVE									
7	Properties & absolute value	(39)	137							
7	Absolute value equations	(40)	160	5						

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV OR V * indicates cumulative test (40 minutes Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
7	Formulas	(41)	138			94				
	Unit 12 test				1	95	12			
	UNIT THIRTEEN									
7	Advanced word problems	(42)	132	4		99				
	Unit 13 test				1	100	13			
	UNIT FOURTEEN									
8	Graphs-relations	(43)	150							
8	Coordinate plane	(44)	191							
8	Straight lines-introduction	(45)	107	8				5 tests	7 tests	
8	Straight line-definition	(46)	148			108				
	Unit 14 test				1	109	14			
	Cumulative review test 4 *				1	110	cum. 4	*	*	
	UNIT FIFTEEN									
8	Slope-straight line	(47)	181							
8	Point-slope equation	(48)	60							
8	Slope-intercept	(49)	147	7						
9	System of equations	(50)	129			117				
	Unit 15 test				1	118	15			
	UNIT SIXTEEN									
9	Word problems two varities	(51)	64	3		121				
	Unit 16 test				1	122	16			
	UNIT SEVENTEEN									
9	Exponents	(52)	115							
9	Exponential expressions	(53)	119							
9	Multiplication & division	(54)	104							

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV OR V * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
9	Division & exponents	(55)	113	9						
9	More multiplication & division	(56)	52							
9	Using exponents	(57)	44			131				
	Unit 17 test				1	132	17			
	UNIT EIGHTEEN									
9	Polynomials	(58)	197					4 tests		
9	Multiplication monomials	(59)	104							
9	Multiplication polynomials	(60)	94	8						
10	Division polynomials	(61)	69			140				
	Unit 18 test				1	141	18			
	Cumulative review test 5 *				1	142	cum. 5	*	*	
	UNIT NINETEEN									
10	Factoring	(62)	200							
10	Rational expressions	(63)	56							
10	Radicals	(64)	115	8						
10	Simplifying radicals	(65)	124			150				
	Unit 19 test				1	151	19			
	UNIT TWENTY									
10	Radical equations	(66)	45					5 tests	7 tests	
10	Quadratic equations	(67)	146							
10	Completing square	(68)	84	7						
10	Quadratic formula	(69)	97			158				
	Unit 20 test				1	159	20			
	UNIT TWENTY-ONE									
10	Solution by graphing	(70)	58							

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
10	Quadratic equations	(71)	35	2		161				
	Unit 21 test				1	162	21			
	UNIT TWENTY-TWO									
10	Solution set of inequalities	(72)	45	3						
10	Proof	(73)	85			165				
	Unit 22 test				1	166	22			
	Cumulative review test 6 *				1	167	cum. 6	*	*	
	Standard tests				2	169				
	Collect books			1		170				
			8416	137	33	170	28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV * indicates cumulative test (40 minutes) Tests 1,2,3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-issue books		2		2				
	Standardized tests			2	4				
1	Symbols and order of operation	1-502	5	1	10	1	5 tests	7 tests	
1	Numerical and algebraic expressions	503-975	4	1	15	2			
1	Equations	976-1513	5	1	21	3			
1	Formulas	1514-1970	5	1	27	4			
	Cumulative review test 1	1-1970		1	28	cum. 1	*	*	
2	Positive and negative numbers	1971-2760	8	1	37	5	5 tests		
2	Removing parentheses	2761-3030	5	1	43	6			
2	Operations with monomials binomials & polynomials	3031-3357	6	1	50	7			
	Cumulative review test 2	1971-3357		1	51	cum. 2	*	*	
2	Equations (two step)	3358-3654	6	1	58	8			
2	Graphs	3655-4027	5	1	64	9	5 tests	8 tests	
	Cumulative review test 3	3358-4027		1	65	cum. 3	*	*	
3	Systems of equations	4028-4300	5	1	71	10			
3	Verbal problems	4301-4601	7	1	79	11			
3	Special products and factoring	4602-5082	6	1	86	12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION IV * indicates cumulative test (40 minutes) Test 1,2,3, ..., 22 (35 minutes TEMAC

BK. #	TOPIC	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Midyear test			1	37				
3	Factoring trinomials	5083-5283	6	1	94	13			
	Cumulative review test 4	4028-5283		1	95	cum. 4	5 tests *	7 tests *	
3	Solving second degree equations	5284-5461	5	1	101	14			
4	Fractions	5462-6150	8	1	110	15			
4	Fractional equations	6151-6330	3	1	114	16			
4	Verbal problems	6331-6511	10	1	125	17			
	Cumulative review test 5	5284-6511		1	126	cum. 5	*	*	
4	Square roots & radicals	6512-6766	7	1	134	18			
4	Solving quadratic equations	6767-6931	6	1	141	19	4 tests		
5	Ratio & proportion	6932-7127	5	1	147	20			
5	Verbal problems	7128-7308	4	1	152	21			
5	Numerical trigonometry	7309-7551	4	1	157	22			
	Cumulative review test 6	6512-7551		1	158	cum. 6	*	*	
5	Review	7552-8312	9		167				
	Standardized tests			2	169		4 tests	6 tests	
	Collecting books		1		170				
		8312	137	33	170	28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative tests (40 minutes) Unit tests 1,2,3,...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-books			2		2				
	Standardized tests				2	4				
	UNIT ONE									
1	Numbers & numerals	(1)	69							
1	Directed numbers	(2)	219							
1	Absolute value	(3)	249	7						
1	Real numbers	(4)	53			11				
	Unit 1 test				1	12	1			
	UNIT TWO									
2	Sets & subsets	(5)	148							
2	Intersection & union sets	(6)	173	4		16		4 tests	7 tests	
	Unit 2 test				1	17	2			
	UNIT THREE									
2	Ordered pairs & relations	(7)	160							
2	Functions	(8)	129	6						
2	Inequalities, graphs & relations	(9)	135			23				
	Unit 3 test				1	24	3			
	Cumulative review test 1 *				1	25	cum. 1	*	*	
	UNIT FOUR									
2	Functions & their converses	(10)	115							
2	Complements of sets	(11)	103	6						
2	Mappings	(12)	206			31				
	Unit 4 test				1	32	4			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT FIVE									
3	Points & real numbers	(13)	72							
3	Order properties	(14)	52	4						
3	Binary operations	(15)	132			36				
	Unit 5 test				1	37	5			
	UNIT SIX									
3	Closure	(16)	49							
3	Identity elements	(17)	92	4						
3	Inverses	(18)	175			41				
	Unit 6 test				1	42	6			
	UNIT SEVEN									
4	Commutative operations	(19)	69							
4	Subtraction of directed numbers	(20)	95					6 tests		
4	Associative operation	(21)	58	7						
4	Distributive operation	(22)	63							
4	Laws of arithmetic	(23)	108			49				
	Unit 7 test				1	50	7			
	Cumulative review test 2 *				1	51	cum. 2	*	*	
	UNIT EIGHT									
4	Absolute value	(24)	54							
4	Multiplication of directed numbers	(25)	78							
5	Equations, pronumerals & solution sets	(26)	111	7						
5	Equations involving multiplication & division	(27)	156			58				
	Unit 8 test				1	59	8			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPICS	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	UNIT NINE									
5	Identities, expressions and terms	(28)	139							
5	Equations with two pronumerals	(29)	282							
5	1-step equations	(30)	134	9						
6	More equations	(31)	76			68				
	Unit 9 test				1	69	9			
	UNIT TEN									
6	Two-step equations	(32)	76							
6	Linear equations	(33)	165	8						
6	Fractional equations	(34)	148			77				
	Unit 10 test				1	78	10	4 tests	7 tests	
	UNIT ELEVEN									
6	Word problems	(35)	89							
6	Properties of inequalities	(36)	108	8						
6	Solving inequalities	(37)	189							
6	Inequalities & relations	(38)	45			86				
	Unit 11 test				1	87	11			
	Cumulative review test 3 *				1	88	cum. 3	*	*	
	Midyear				1	89				
	UNIT TWELVE									
7	Properties & absolute value	(39)	137							
7	Absolute value equations	(40)	160	5						

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
7	Formulas	(41)	138			94				
	Unit 12 test				1	95	12			
	UNIT THIRTEEN									
7	Advanced word problems	(42)	132	4		99				
	Unit 13 test				1	100	13			
	UNIT FOURTEEN									
8	Graphs-relations	(43)	150							
8	Coordinate plane	(44)	191							
8	Straight lines-introduction	(45)	107	8				5 tests	7 tests	
8	Straight line-definition	(46)	148			108				
	Unit 14 test				1	109	14			
	Cumulative review test 4 *				1	110	cum. 4	*	*	
	UNIT FIFTEEN									
8	Slope-straight line	(47)	181							
8	Point-slope equation	(48)	60							
8	Slope-intercept	(49)	147	7						
9	System of equations	(50)	129			117				
	Unit 15 test				1	118	15			
	UNIT SIXTEEN									
9	Word problems two varities	(51)	64	3		121				
	Unit 16 test				1	122	16			
	UNIT SEVENTEEN									
9	Exponents	(52)	115							
9	Exponential expressions	(53)	119							
9	Multiplication & division	(54)	104							

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
9	Division & exponents	(55)	113	9						
9	More multiplication & division	(56)	52							
9	Using exponents	(57)	44			131				
	Unit 17 test				1	132	17			
	UNIT EIGHTEEN									
9	Polynomials	(58)	197							
9	Multiplication monomials	(59)	104					4 tests		
9	Multiplication polynomials	(60)	94	8						
10	Division polynomials	(61)	69			140				
	Unit 18 test				1	141	18			
	Cumulative review test 5 *				1	142	cum. 5	*	*	
	UNIT NINETEEN									
10	Factoring	(62)	200							
10	Rational expressions	(63)	56							
10	Radicals	(64)	115	8						
10	Simplifying radicals	(65)	124			150				
	Unit 19 test				1	151	19			
	UNIT TWENTY									
10	Radical equations	(66)	45							
10	Quadratic equations	(67)	146					5 tests	7 tests	
10	Completing square	(68)	84	7						
10	Quadratic formula	(69)	97			158				
	Unit 20 test				1	159	20			
	UNIT TWENTY-ONE									
10	Solution by graphing	(70)	58							

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes) Unit tests 1,2,3, ...,22 (35 minutes) SRA

Bk. #	TOPIC	Ch. #	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
10	Quadratic equations	(71)	35	2		161				
	Unit 21 test				1	162	21			
	UNIT TWENTY-TWO									
10	Solution set of inequalities	(72)	45	3						
10	Proof	(73)	85			165				
	Unit 22 test				1	166	22			
	Cumulative review test 6 *				1	167	cum. 6	*	*	
	Standard tests				2	169				
	Collect books			1		170				
			8416	137	33	170	28	28	28	

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes) Tests 1,2,3, ..., 22 (35 minutes) TEMAC

Bk. #	TOPIC	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Orientation-issue books		2		2				
	Standardized tests			2	4				
1	Symbols and order of operation	1-502	5	1	10	1	5 tests	7 tests	
1	Numerical and algebraic expressions	503-975	4	1	15	2			
1	Equations	976-1513	5	1	21	3			
1	Formulas	1514-1970	5	1	27	4			
	Cumulative review test 1	1-1970		1	28	cum. 1	*	*	
2	Positive and negative numbers	1971-2760	8	1	37	5			
2	Removing parentheses	2761-3030	5	1	43	6			
2	Operations with monomials binomials & polynomials	3031-3357	6	1	50	7	* 5 tests		
	Cumulative review test 2	1971-3357		1	51	cum. 2	*	*	
2	Equations (two step)	3358-3654	6	1	58	8			
2	Graphs	3655-4027	5	1	64	9			
	Cumulative review test 3	3358-4027		1	65	cum. 3	*	*	
3	Systems of equations	4028-4300	5	1	71	10			
3	Verbal problems	4301-4601	7	1	79	11	5 tests	8 tests	
3	Special products and factoring	4602-5082	6	1	86	12			

RATE OF COVERAGE & TESTING SCHEDULE

CONDITION V * indicates cumulative test (40 minutes) Test 1,2,3, ..., 22 (35 minutes TEMAC

BK. #	TOPIC	FRAMES	DAYS ON UNIT	DAYS TEST.	DAYS CUM.	TEST #	6 wk MARK	9 wk MARK	COMMENTS
	Midyear test			1	87				
3	Factoring trinomials	5083-5283	6	1	94	13			
	Cumulative review test 4	4028-5283		1	95	cum. 4	5 tests *	7 tests *	
3	Solving second degree equations	5284-5461	5	1	101	14			
4	Fractions	5462-6150	8	1	110	15			
4	Fractional equations	6151-6330	3	1	114	16			
4	Verbal problems	6331-6511	10	1	125	17			
	Cumulative review test 5	5284-6511		1	126	cum. 5	*	*	
4	Square roots & radicals	6512-6766	7	1	134	18			
4	Solving quadratic equations	6767-6931	6	1	141	19	4 tests		
5	Ratio & proportion	6932-7127	5	1	147	20			
5	Verbal problems	7128-7308	4	1	152	21			
5	Numerical trigonometry	7309-7551	4	1	157	22			
	Cumulative review test 6	6512-7551		1	158	cum. 6	*	*	
5	Review	7552-8312	9		167		4 tests	6 tests	
	Standardized tests			2	169				
	Collecting books		1		170				
		8312	137	33	170	28	28	28	

SUMMARY RECORD (S.R.A.)

Student No.	Read. Level	I. Q.	Student's Name	Ch. 1	Ch. 2	Ch. 3	Cum.1	Ch.4	Ch. 5	Ch. 6	Ch. 7	Cum.2	Ch. 8	Ch. 9	Ch.10	Ch.11	Cum.3	Midyr. Test	Ch.12	Ch.13	Ch.14
1.																					
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SUMMARY RECORD (S.R.A.)

Cum.4	Ch.15	Ch.16	Ch.17	Ch.18	Cum.5	Ch.19	Ch.20	Ch.21	Ch.22	Cum.6	Final Exam.	Post test	Supplementary Material						Report Card Grades						Course Grade	Comments

SUMMARY RECORD (S.R.A)

Student No.	Read. Level	I. Q.	Student's Name	Ch. 1	Ch. 2	Ch. 3	Cum.1	Ch. 4	Ch. 5	Ch. 6	Ch. 7	Cum.2	Ch. 8	Ch. 9	Ch.10	Ch.11	Cum.3	Midyr. test	Ch.12	Ch.13	Ch.14

SUMMARY RECORD (S.R.A.)

												Post Test	Supplementary Material						Report Card Grades						Course Grade	Comments
Cum.4	Ch.15	Ch.16	Ch.17	Ch.18	Cum.5	Ch.19	Ch.20	Ch.21	Ch.22	Cum.6	Final Exam.		1	2	3	4	5	6	1	2	3	4	5	6		

SUMMARY RECORD (S.R.A.)

Student No.	Read. Level	I. Q.	Student's Name	Ch. 1	Ch. 2	Ch. 3	Cum.1	Ch.4	Ch. 5	Ch. 6	Ch. 7	Cum.2	Ch. 8	Ch. 9	Ch.10	Ch.11	Cum.3	Midyr. test	Ch.12	Ch.13	Ch.14
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SUMMARY RECORD (S.R.A.)

												Post test	Supplementary Material						Report Card Grades						Course Grade	Comments
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SUMMARY RECORD (TEMAC)

Student No.	Read. Level	I. Q.	Student's Name	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Cum.1	Ch. 5	Ch. 6	Ch. 7	Cum.2	Ch. 8	Ch. 9	Cum.3	Ch.10	Ch.11	Ch.12	Midyr test	Ch.13	Cum.4
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SUMMARY RECORD (TEMAC)

												Post test	Supplementary Material						Report Card Grades						Course Grade	Comments
Ch.14	Ch.15	Ch.16	Ch.17	Cum.5	Ch.18	Ch.19	Ch.20	Ch.21	Ch.22	Cum.6	Final Exam		1	2	3	4	5	6	1	2	3	4	5	6		

SUMMARY RECORD (TEMAC)

Student No.	Read. Level	I. Q.	Student's Name	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Cum.1	Ch. 5	Ch. 6	Ch. 7	Cum.2	Ch. 8	Ch. 9	Cum.3	Ch.10	Ch.11	Ch.12	Midyr test	Ch.13	Cum.4

SUMMARY RECORD (TEMAC)

												Post test	Supplementary Material						Report Card Grades						Course Grade	Comments
Ch.14	Ch.15	Ch.16	Ch.17	Cum.5	Ch.18	Ch.19	Ch.20	Ch.21	Ch.22	Cum.6	Exam. Final		1	2	3	4	5	6	1	2	3	4	5	6		

SUMMARY RECORD (TEMAC)

Student No.	Read. Level	I. Q.	Student's Name	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Cum.1	Ch. 5	Ch. 6	Ch. 7	Cum.2	Ch. 8	Ch. 9	Cum.3	Ch.10	Ch.11	Ch.12	Midyr test	Ch.13	Cum.4
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SUMMARY RECORD (TEMAC)

												Post test	Supplementary Material						Report Card Grades						Course Grade	Comments
Ch.14	Ch.15	Ch.16	Ch.17	Cum.5	Ch.18	Ch.19	Ch.20	Ch.21	Ch.22	Cum.6	Exam Final		1	2	3	4	5	6	1	2	3	4	5	6		

PROGRESS CHART (S.R.A.)

		Chapter																														
No.	Student's Name	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
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PROGRESS CHART (S.R.A.)

Chapter

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PROGRESS CHART (S.R.A.)

No.	Student's Name	Chapter 1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
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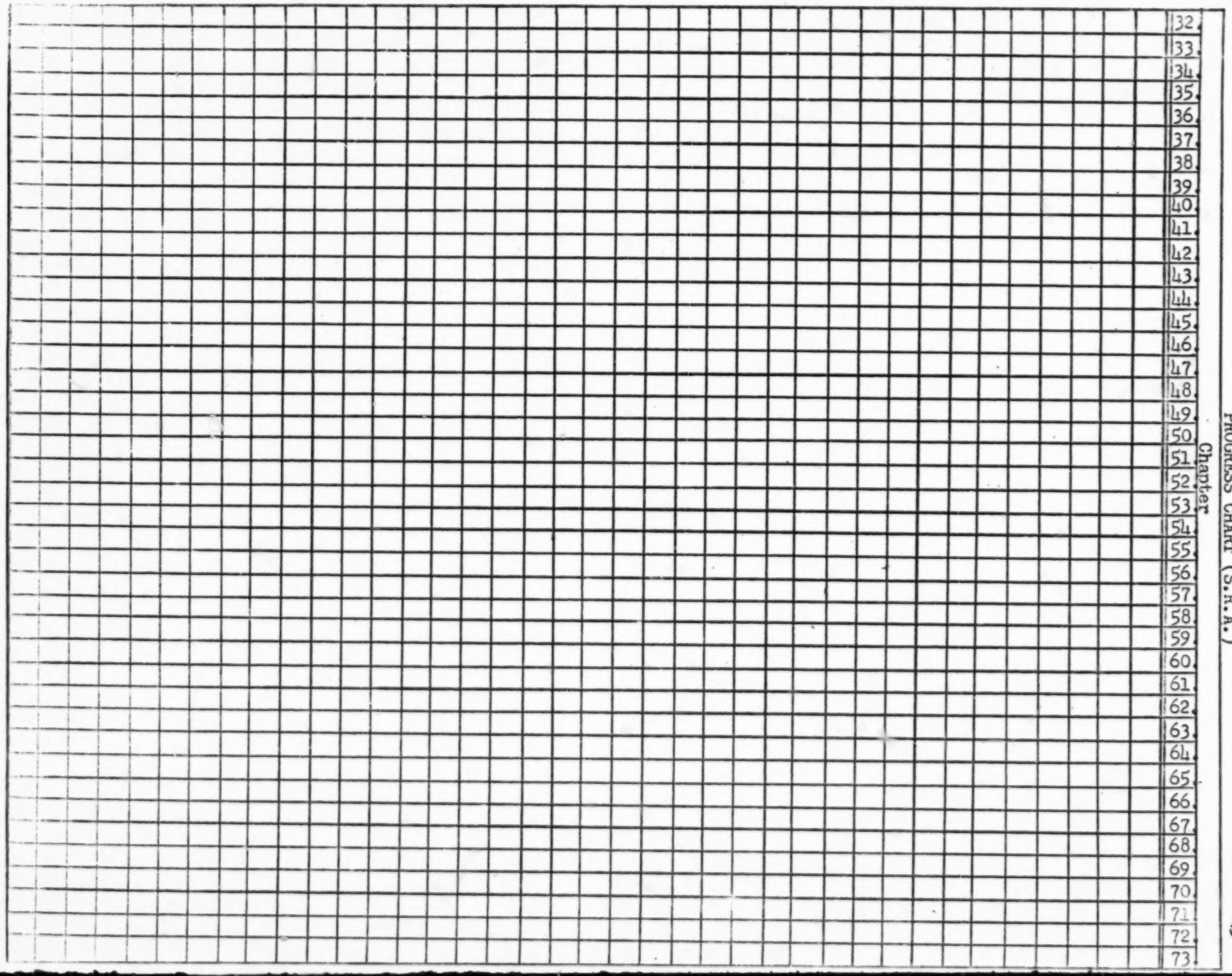
PROGRESS CHART (S.R.A.)

Chapter



PROGRESS CHART (TEMAC)

No.	Student's Name	Frames																							
		150	300	450	600	750	900	1,050	1,200	1,350	1,500	1,650	1,800	1,950	2,100	2,250	2,400	2,550	2,700	2,850	3,000	3,150	3,300	3,450
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PROGRESS CHART (TEMAC)

No.	Student's Name	Frames																						
		150	300	450	600	750	900	1,050	1,200	1,350	1,500	1,650	1,800	1,950	2,100	2,250	2,400	2,550	2,700	2,850	3,000	3,150	3,300	3,450
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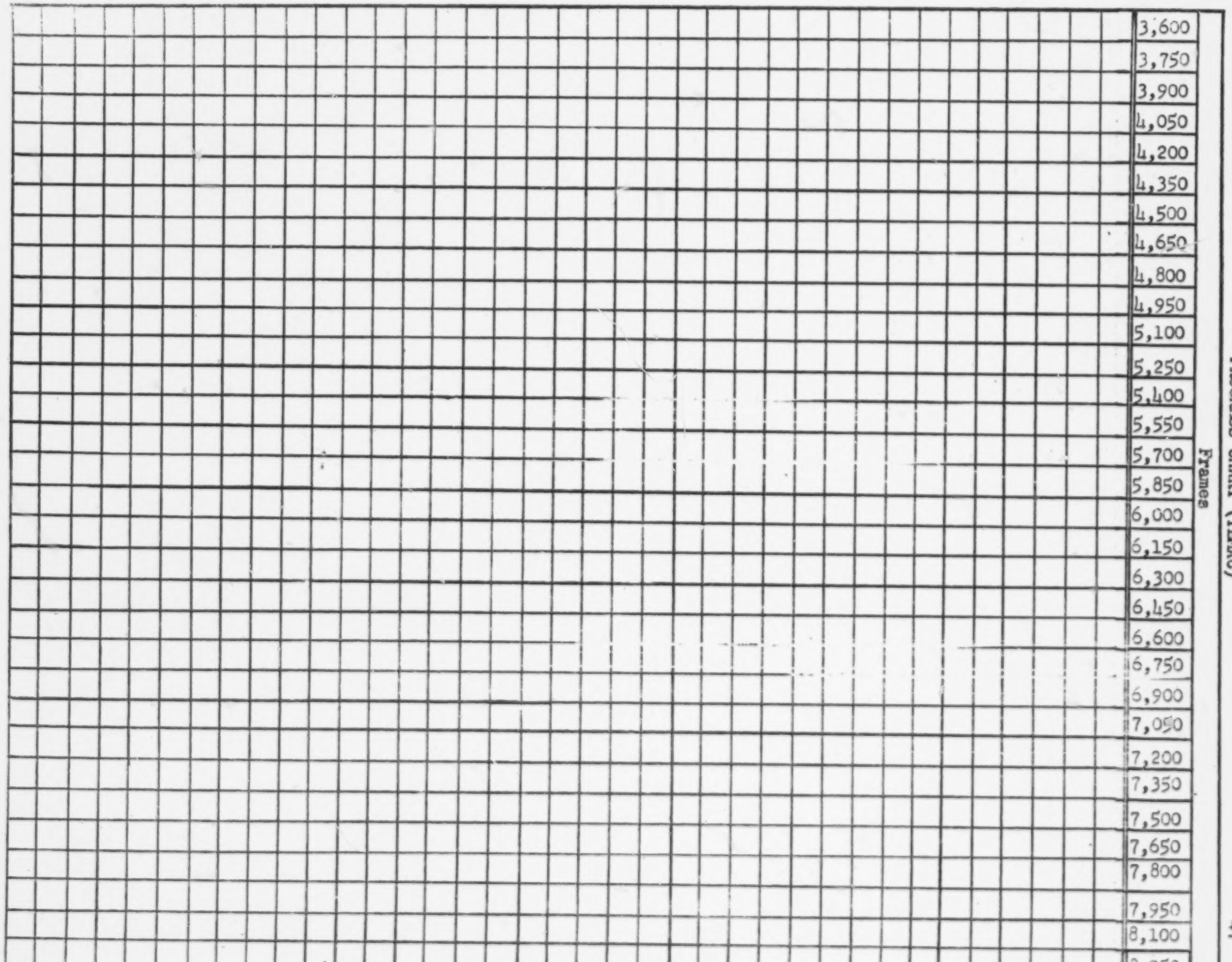

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PROGRESS CHART (S.R.A.)

		Chapter																														
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PROGRESS CHART (S.R.A.)

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PROGRESS CHART (S.R.A.)

		Chapter																														
No.	Student's Name	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.
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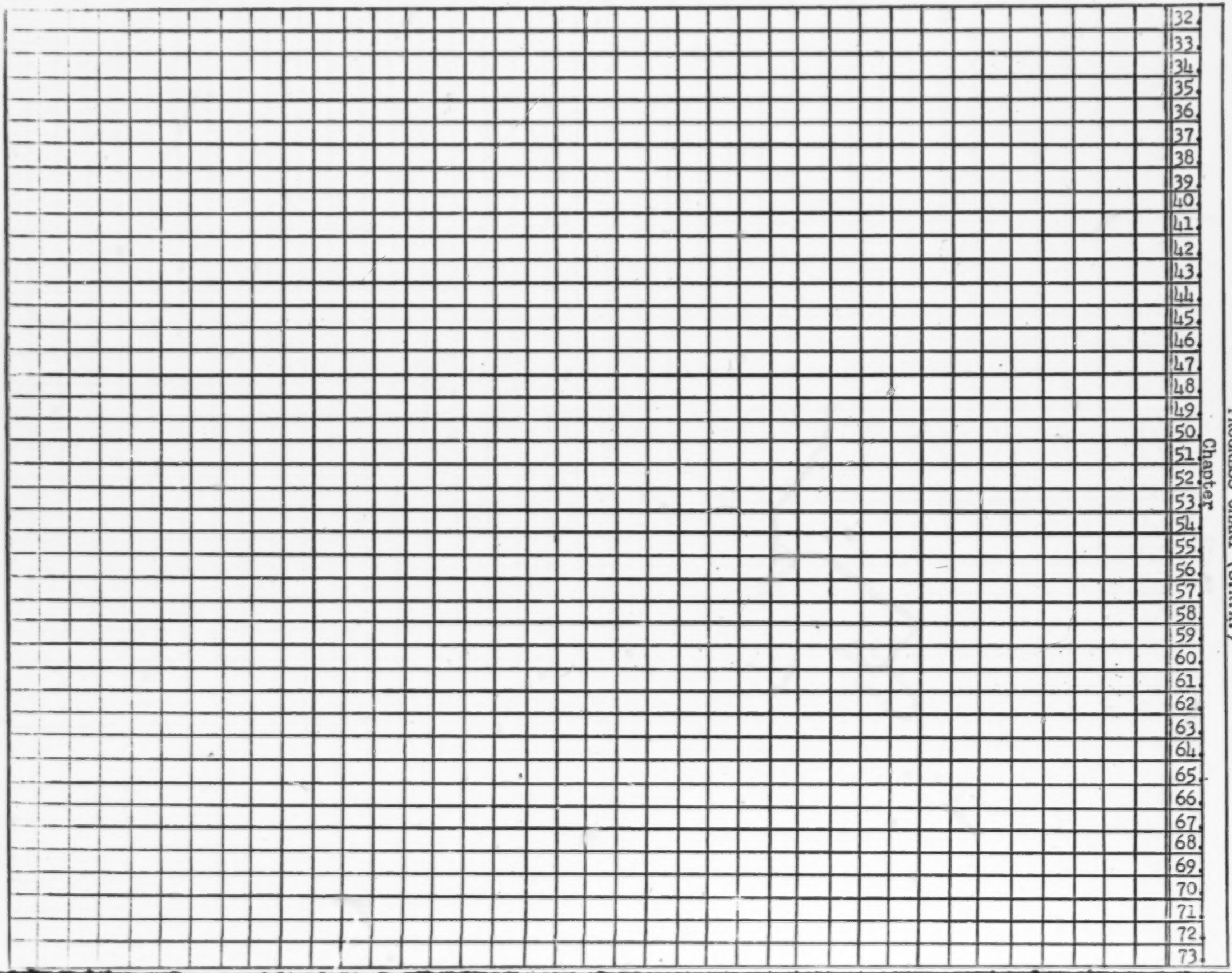

PROGRESS CHART (S.R.A.)

PROGRESS CHART (TEMAC)

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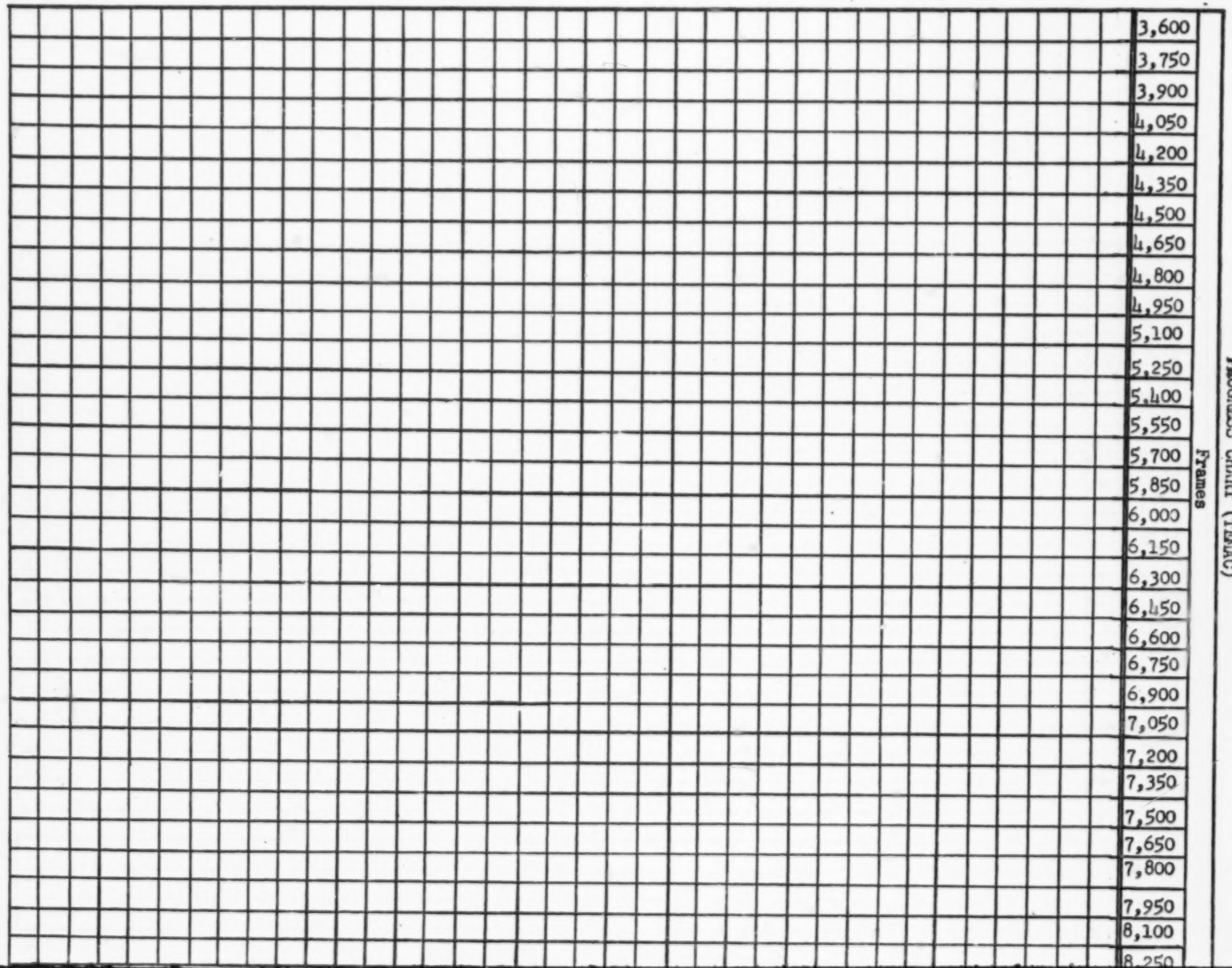

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PROGRESS CHART (TEMAC)

No.	Student's Name	Frames																							
		150	300	450	600	750	900	1,050	1,200	1,350	1,500	1,650	1,800	1,950	2,100	2,250	2,400	2,550	2,700	2,850	3,000	3,150	3,300	3,450
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PROGRESS CHART (TEMAC)

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